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Youth Suicide in the United States

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Abstract

Youth suicide continues to be a public health crisis in the United States. The American Foundation for Suicide Prevention (AFSP) has identified four critical areas where a coordinated approach to suicide prevention can make a powerful contribution to this goal. One of these critical areas is healthcare systems. To fully equip these clinicians to develop the most effective suicide prevention interventions, it is important that they gain a complete picture of who may commit youth suicide. The central aim of this paper is to collect information relevant to suicide and suicide prevention to help educate allied healthcare professionals who may interact with suicidal populations.

Introduction

Despite suicide prevention efforts, the United States continues to see a rising suicide rate. The American Foundation for Suicide Prevention (AFSP) has announced Project 2025, a nationwide initiative to reduce the annual rate of suicide in the United States by twenty percent by the year 2025, according to American Foundation for Suicide Prevention (2020). ASFP has identified four critical areas where a coordinated approach to suicide prevention can make a powerful contribution to this goal. One of these critical areas is healthcare systems. Research conducted as part of Project 2025 has identified that most people who commit suicide visit a healthcare facility months before their death. This finding presents healthcare facilities as a wonderful opportunity to identify and support people at risk for committing suicide. Additionally, according to the U.S. Department of Health and Human Services (2020), Healthy People 2030 has named an objective to reduce the suicide rate from 14.2 to 12.8 suicides per 100,000 population. Healthy People 2030 has declared that suicide is one of the

leading causes of death nationwide, particularly among youth, and rates continue to rise. They propose that addressing behaviors that increase the risk of suicide may help to reduce the overall rate. This paper aims to consolidate information on suicide statistics, demographics, risk and protective factors to educate healthcare clinicians who may work with at-risk populations.

Perhaps the most devastating aspect of suicide is its preventability, yet it continues to be a leading cause of death in American young people. Although there has certainly been a plethora of research done on youth suicide in general and many resources have been made available for medical doctors and nurses in the areas of emergency and psychiatric medicine, little has been published to educate other healthcare clinicians that may work with suicidal youth. Professionals in occupational therapy, social work, pharmacy, nutrition and dietetics, and other fields often interact with suicidal patients yet typically receive little education or training in this area. To fully equip these clinicians to develop the most effective suicide prevention interventions, it is important that they gain a complete picture of who may commit youth suicide.

The information gathered in this review focuses on American youth under the age of 18. The central aim of this paper is to collect information relevant to suicide and suicide prevention to help educate allied healthcare professionals who may interact with suicidal populations. As a future occupational therapist, I wanted to learn how I could better care for suicidal youth. Occupational therapy is heavily involved in mental health settings, by nature of its core philosophies. Occupational therapy is the practice of using therapeutic occupations, or actions meaningful to an individual, to facilitate rehabilitation, independence, and quality of

life. The nature of occupational therapy helps fulfill an individual's sense of purpose and belonging, a critical protective factor against suicide.

This systematic review seeks to provide a holistic overview of youth suicide to other healthcare clinicians. Therefore, clinicians who read this work will hopefully be better prepared to care for these young people and can implement more effective interventions. Youth suicide is a critical issue in the United States and healthcare clinicians have the ability to make a significant impact on this problem.

Literature Review

Demographics

Suicide and its precipitators are issues that affect all age groups. Sheftall, Asti, Horowitz, Felts, Fontanella, Campo, and Bridge (2016) describe precipitating circumstances of suicide in elementary-aged children and identify potential racial differences within this population. The study finds that children who die by suicide are more commonly male, black, chose a method of hanging/strangulation/suffocation, and die at home. Children who die by suicide are more likely to experience relational issues with family members or friends and often do not leave suicide notes. In child decedents of suicide who had known mental health problems, attention-deficit disorder with or without hyperactivity was a more likely predictor of suicidal behavior than depression. The article says that suicide is a leading cause of death in US elementary-aged children and calls for developmentally specific suicide prevention strategies. As elementary-aged children graduate to adolescence, the issue persists.

While suicide continues to be a critical issue in adolescence, the demographics of this population vary from elementary-aged populations. A study by Pena, Matthieu, Zayas, Masyn,

and Caine (2012) identifies subtypes of adolescent suicide attempters by examining substance use, violent behavior, depressive symptoms, race, gender, and the number of suicide attempts. The study identifies three classes of adolescent suicide attempters that can be distinguished as low substance use and violent behaviors, high substance use and violent behaviors, and extreme substance use and violent behaviors. Depressive symptoms are present in all three classes. As the number of suicide attempts increases, levels of substance use and violent behavior also increases. Race and gender differences present across all subtypes. In conclusion, Pena, et.al., (2012) call for the prevention and treatment of co-occurring substance use and violent behavior to reduce suicide attempts in youth.

Suicide Risk and Protective Factors

There is no denying the urgency surrounding suicide prevention in the United States. Stone, Simon, Fowler, Kegler, Yuan, Holland, Ivey-Stephenson, and Crosby (2018) examine suicide trends and precipitating factors in the United States at the state-level. The authors share that suicide rates increased significantly in 44 of 50 states from 1999-2016. The article states that relationship problems/loss, life stressors, and recent/impending crises were more likely among decedents without known mental health conditions than in decedents with known mental health issues. The authors call for action regarding statewide suicide prevention to address the full range of suicide risk factors. This article displays the importance of studying risk and protective factors to prevent death by suicide.

Some of the most well-known suicide risk factors are considered “classic” risk factors. A study by Kim, Moon, and Kim (2011) examines the relationship between physical and psycho-social predictors and suicidal behaviors. According to the survey results, depression, gender,

and suicide significantly correlate with one another. Female participants are more likely to be depressed than male participants, and depression is associated with suicide. The study also finds that substance use is another significant predictor of suicidal behavior. An additional finding of the study is the correlation between suicidal behaviors, body image, and weight control behaviors. Extreme weight control behaviors, like taking diet pills, self-induced emesis, and the use of laxatives and diuretics, and negative body image significantly correlate with suicidal behaviors. In addition to these classic risk factors, culture has a significant role in predicting suicidal behavior.

A study by Chu, Robinett, Ma, Shadish, Goldblum, and Bongar (2019) examined the predictive value of cultural versus classic risk and protective factors for suicide. The study examined depression, hopelessness, and reasons for living as classic risk and protective factors and acculturative stress, social sanctions, family conflict, idioms of distress-emotional/somatic, idioms of distress-suicide actions, LGBTQ minority stress, nonspecific minority stress, and social discord as cultural and protective risk factors. The authors found that classic and cultural factors are significant predictors of suicidal behavior.

İlgün, Yetim, Demirci, and Konca (2020) reflect on the effect of psychological, behavioral, socio-demographic, and economic determinants on suicide. The results of the study state that depression, alcohol consumption, literacy rate, and unemployment have a statistically significant relation to suicidal behavior. The authors call for federal governments to take preventative action by introducing alcohol-regulating legislation like age restrictions. They also suggest that federal governments should minimize suicide cases during economic crises by

increasing social awareness. The relationship between psychopathy, or mental disorders, and suicide is profound, but personality may also be a strong predictor of suicide.

McCann (2010) explores the relationship between the "Big Five" personality traits of neuroticism, conscientiousness, openness to experience, agreeableness, and extraversion, and suicide. His findings indicate that state suicide rates were higher in association with individuals with lower neuroticism, agreeableness, higher White population percentage, lower urban population percentage, lower socioeconomic status, and higher depression rates. McCann (2010) theorizes that his most striking finding, that lower neuroticism is associated with higher suicide rates, may be explained by less neurotic suicide-prone individuals drawing less concern from others while more neurotic suicide-prone individuals may be more likely to seek social and professional support.

Suicide Awareness and Prevention

When considering the suicide epidemic in the United States, it is reasonable to conclude that current awareness and prevention efforts leave much room for improvement. According to Reidenberg and Berman (2017), despite the growing number of suicide prevention efforts, suicide in the United States continues to rise. This article documents the suggestions of a multidisciplinary expert panel set out to propose an innovative approach to improve success in prevention efforts. The summit recommends that an industry leader needs to emerge to create a more coordinated, cohesive, and accountable effort to prevent suicide in the United States. The panel also suggests sustained federal pressure and effort towards suicide prevention. Regarding funding, the summit states that corporations should be made aware of the economic cost of suicide to encourage donations from these corporations to suicide

prevention efforts. Moreover, the loudest message from the panel was to promote a more unified effort. Specifically, Reidenberg and Berman (2017) state that the cohesion of this movement should resemble a single voice created through a united effort.

Graves, Mackelprang, Van Natta, and Holliday (2018) compare state policies for health care professional suicide prevention training across the United States to each other and the national recommendations set by the surgeon general. Their findings report that as of October 2017, 10 states had passed legislation requiring health care professionals to complete suicide prevention training and 7 states had policies encouraging training. The authors report that state policies regarding suicide prevention training for health care professionals vary considerably and call for a unified approach for such policies.

While there is certainly room to advocate for suicide prevention through state and federal legislation, Smith (2018) provides a specific protocol for acute healthcare settings. The author shares that 1,500 suicides take place in inpatient hospital units in the United States each year. Smith (2018) continues to call nurses to act in preventing suicide attempts in hospitals across the nation. The article begs nurses to review each patient's personal and family history for risk factors and screen all patients for suicide ideation upon admission. Once admitted, patients should be observed if they present an acute risk for suicide, and an immediate psychiatric consultation should be obtained. Nurses should also provide the National Suicide Prevention Lifeline number to all patients with suicidal ideation and help the patient to identify coping strategies. It may also be helpful to restrict the patient's access to lethal means and assess and modify the environment to optimize patient safety. The author also recommends

that hospitals minimize ligatures in all hospital rooms or move at-risk patients to rooms with no ligatures and demonstrate that staff is frequently trained and tested on suicide prevention.

A more unique perspective on suicide prevention is provided by Hochhauser, Rao, England-Kennedy, and Roy (2020) regarding the relationship between social justice and suicide. The authors suggest that suicide disproportionately affects those that experience inequities, discrimination, oppression, and historical trauma. They theorize that incorporating social justice reform in already existing suicide prevention efforts will improve results. They call for education, engagement, advocacy, and action in states with high suicide rates and societal inequality.

Methods

The information in this paper was gathered for the purpose of consolidating information on youth suicide to afford healthcare providers working with this population a complete picture of this situation. The data collected is secondary quantitative and qualitative data. Since this paper aims to review existing literature to aid healthcare clinicians, this method is the most suitable approach for gathering information. Because this paper was based entirely on existing literature, there was careful investigation into the validity and reliability of the articles chosen for review. Articles were inspected for adequate population size, quality methods, and respectable sources.

Quantitative data was collected from the WISQARS Leading Causes of Death (2020) to investigate how age, race, and sex may influence suicide deaths and rates. The National Vital Statistics System (NVSS), operated by the National Center for Health Statistics, is the data source for WISQUARS Fatal Injury Reports. All fatal injuries with suicidal intent in the United

States in 2018, using 2000 as the standard year for age adjusting, were included to generate the number of deaths and crude rates for males and females ages 0-17 of Hispanic and Non-Hispanic White, Black, American Indian/Alaskan Native, Asian/Pacific Islander, and other races.

Information on risk factors was gathered from reports on the annual Youth Risk Behavior Surveillance System (YRBSS). YRBSS was developed in 1990 to monitor health behaviors that contribute to leading causes of death, disability, and social problems among children and adults in the United States that are often established during youth. Among some of the behaviors monitored are ones that contribute to suicidal ideation and behaviors in children and adolescents, including suicidal ideation, making a suicide plan, suicide attempts, frequency of suicide attempts, and suicide attempts that required medical treatment. The Center for Disease Control's Morbidity and Mortality Weekly Report (MMWR) has published several pieces of literature generated from YRBSS, and the report containing information relevant to youth suicide, Suicidal Ideation and Behaviors Among High School Students — Youth Risk Behavior Survey, United States, 2019, by Ivey-Stephenson, et.al.,(2020), has been analyzed and included in this article.

References were found using a search of peer reviewed articles in the Academic Search Complete, MEDLINE with Full Text, Psychology and Behavioral Sciences Collection, SPORTDiscus with Full Text, and Health Source: Nursing/Academic Edition databases. Research published before 2010 was excluded from this work. Information regarding suicide statistics, demographics, risk and protective factors for this population was selected from articles that met the other inclusion criteria. The findings of these articles have been synthesized in this review. Articles had to be peer reviewed to be included. They also had to focus on youth under

18 years old in the United States. Validity and reliability were also considered when selecting articles.

Results

Demographical information collected from the WISQARS Leading Causes of Death (2020) report showed the average number of deaths, average population, and average rate of suicide among Hispanic and Non-Hispanic White, Black, American Indian/Alaskan Native, Asian/Pacific Islander, and other races. All data is per 100,000 people. White, Non-Hispanics had 74.61 average number of deaths, 2,149,917 average population, and 3.25 average rate. White, Hispanics had 19.14 average number of deaths, 915,023 average population, and 2.12 average rate. Black, Non-Hispanics had 12.28 average number of deaths, 619,578 average population, and 1.95 average rate. Black, Hispanics had 0.69 average number of deaths, 66,206 average population, and 1.18 average rate. American Indian/Alaskan Native, Non-Hispanics had 3.34 average number of deaths, 40,459 average population, and 9.37 average rate. American Indian/Alaskan Native, Hispanics had 0.36 average number of deaths, 36,347 average population, and 2.34 average rate. Asian/Pacific Islander, Non-Hispanics had 5.81 average number of deaths, 242,018 average population, and 2.34 average rate. Asian/Pacific Islander, Hispanics had 0.22 average number of deaths, 21,291 average population, and 1.12 average rate. All other races had 10.33 average number of deaths, 340,115 average population, and 3.01 average rate.

Asian/Pacific Islander, Hispanics had the lowest average rate (1.12) and American Indian/Alaskan Native, Non-Hispanics had the highest average rate (9.37). White, Non-

Hispanics started seeing suicide at the youngest age (7-8 years). Black, Hispanics and American Indian/Alaskan Native, Hispanics started seeing suicide later (13-14 years).

Ages 0-1 year had 0 average number of deaths, 466,621 average population, and 0.00 average rate. Ages 1-2 years had 0 average number of deaths, 475,815 average population, and 0.00 average rate. Ages 2-3 years had 0 average number of deaths, 483,942 average population, and 0.00 average rate. Ages 3-4 years had 0 average number of deaths, 485,900 average population, and 0.00 average rate. Ages 4-5 years had 0 average number of deaths, 484,326 average population, and 0.00 average rate. Ages 5-6 years had 0 average number of deaths, 483,762 average population, and 0.00 average rate. Ages 6-7 years had 0 average number of deaths, 485,709 average population, and 0.00 average rate. Ages 7-8 years had 0.11 average number of deaths, 488,162 average population, and 0.01 average rate. Ages 8-9 years had 0.56 average number of deaths, 488,366 average population, and 0.20 average rate. Ages 9-10 had 1.67 average number of deaths, 495,977.83 average population, and 0.36 average rate. Ages 10-11 had 4.78 average number of deaths, 504,604 average population, and 1.43 average rate. Ages 11-12 had 9.94 average number of deaths, 503,335 average population, and 3.23 average rate. Ages 12-13 had 16 average number of deaths, 500,718 average population, and 3.40 average rate. Ages 13-14 had 25.17 average number of deaths, 500,719 average population, and 4.83 average rate. Ages 14-15 had 37.06 average number of deaths, 499,662 average population, and 7.54 average rate. Ages 15-16 had 45.44 average number of deaths, 497,063 average population, and 8.26 average rate. Ages 16-17 had 52 average number of deaths, 502,861 average population, and 9.00 average rate. Ages 17-18 had 61.61 average number of deaths, 514,364 average population, and 12.16 average rate. Ages 0-7 had the

lowest rate and progressively increased across the age groups with ages 17-18 having the highest rate.

Males had 20.35 average number of deaths, 502,753 average population, and 3.54 average rate. Females had 7.94 average number of deaths, 481,904 average population, and 2.09 average rate. Males had the highest rate (3.54) and females had the lowest rate (2.09).

According to Ivey-Stephenson, Demisse, Crosby, Stone, Gaylor, Wilkins, Lowry, and Brown (2020), individual, relationship, community, and societal factors contribute to youth suicidal ideation and behavior. During the 12 months before the YRBSS survey, 18.8% of students across the United States seriously considered attempting suicide. Female students had 24.1% prevalence and male students had 13.3% prevalence. 15.7% of students plan how they would attempt suicide. Again, females had a higher prevalence (19.9%) than males (11.3%). 8.9% of students attempted suicide at least one time and .5% of students had made a suicide attempt that required medical treatment. Female prevalence was higher than male prevalence for both items as well.

Ivey-Stephenson, et.al.,(2020) found that there was a significant difference in having seriously considered attempting suicide by race/ethnicity among male students (white: 13.8%; black: 10.7%; Hispanic 11.4%) but not among female students. Among students who made a suicide plan, a difference by race and ethnicity occurred overall (white: 15.7%; black:15.0%; Hispanic: 14.7%) but not among individual sexes. There was not a difference in making a suicide plan by race/ethnicity among male students, but there was overall (white: 7.9%; black:11.8%; Hispanic 8.9%) and among female students (white: 9.4%; black: 15.2%; Hispanic

11.9%). There was no difference overall or among male or female students by race/ethnicity in making a suicide attempt that required medical treatment.

Additionally, Ivey-Stephenson, et.al.,(2020) found that sexual identity also proved to be an important factor in suicidal ideation and behavior among students nationwide. A significant difference in considering a suicide attempt occurred by sexual identity overall (heterosexual: 14.5%; lesbian, gay, and bisexual: 46.8%; other: 30.4%) and among male (heterosexual: 11.4%; lesbian, gay, and bisexual: 40.4%; other: 21.7%) and female (heterosexual: 18.0%; lesbian, gay, and bisexual: 49.0%; other: 35.9%) students. There was also a difference in considering a suicide attempt by sexual contacts overall (only with the opposite sex: 19.4%; only with the same sex or both sexes: 54.2%; no sexual contact: 13.0%) and among male (only with the opposite sex: 14.6%; only with the same sex or both sexes: 39.1%; no sexual contact: 9.7%) and female (only with the opposite sex: 19.4%; only with the same sex or both sexes: 54.2%; no sexual contact: 13.0%) students.

A significant difference occurred in making a suicide plan by sexual identity overall (heterosexual: 12.1%; lesbian, gay, and bisexual: 40.2%; other: 23.9%) and among male (heterosexual: 9.9%; lesbian, gay, and bisexual: 33.0%; other: 17.4%) and female (heterosexual: 14.5%; lesbian, gay, and bisexual: 46.8%; other: 30.4%) students. There was also significant difference in suicidal planning by sexual contact overall (only with the opposite sex: 16.5%; only with the same sex or both sexes: 44.0%; no sexual contact: 10.9%) and among male (only with the opposite sex: 12.9%; only with the same sex or both sexes: 31.2%; no sexual contact: 7.9%) and female (only with the opposite sex: 20.7%; only with the same sex or both sexes: 31.2%; no sexual contact: 7.9%) students.

Lastly, there was a significant difference in attempting suicide by sexual identity overall (heterosexual: 6.4%; lesbian, gay, and bisexual: 23.4%; other: 16.1%) and among male (heterosexual: 5.1%; lesbian, gay, and bisexual: 23.8%; other: 16.4%) and female (heterosexual: 7.9%; lesbian, gay, and bisexual: 23.6%; other: 15.2%) students. There was also significant difference in suicide attempt by sexual contact overall (only with the opposite sex: 9.3%; only with the same sex or both sexes: 30.3%; no sexual contact: 4.8%) and among male (only with the opposite sex: 7.5%; only with the same sex or both sexes: 26.5%; no sexual contact: 3.5%) and female (only with the opposite sex: 11.4%; only with the same sex or both sexes: 31.4%; no sexual contact: 6.1%) students.

In addition to race/ethnicity, gender, sexual orientation, and sexual contact, research supports several other risk and protective factors in youth suicide. For example, Schnitzer, Dykstra, Triglyidas, and Lichenstein (2019) found significant data on firearm ownership and youth suicide. They cite that of those who attempt suicide with firearms, 84% of firearms for suicide attempters and completers are stored in the victim's residence. Of children who committed suicide with a firearm, the suicide took place in the home of the child or a relative of the child 80% of the time. Of suicides that occurred in the child's home, 90% of the deaths were by a firearm owned by the child or their parent. Most firearm suicides used a handgun (60%). Only 11% of the firearms were stored in a locked cabinet and only 9% had at least one documented safety feature.

Additionally, Fang (2018) found significant socioeconomic factors that contributed to youth suicide. The prevalence of attempted suicide was higher in low-income schools (29.4%) compared to middle- (13.4%) and high-income (14.9%) schools in boys. The average family

income was $29,000 in low-income schools, $43,000 in middle-income schools, and $66,000 in high-income schools. 39% of low-income schools were in urban areas, 43% were located in suburban areas, and 18% were located in rural areas. Twenty-three percent of middle-income schools were in urban areas, 60% in suburban areas, and 18% in rural areas. Thirty percent of high-income schools were in urban areas, 63% were in suburban areas, and 7% were in rural areas.

Discussion

My research yielded several interesting demographic conclusions. According to the WISQARS Leading Causes of Death (2017), individuals of Hispanic origin had significantly lower rates of suicide than non-Hispanic individuals of the same race. Hispanic origin appears to be a protective factor against suicidal ideation and behavior while non-Hispanic origin appears to be a risk factor. Additionally, individuals of Asian/Pacific Island descent also had statistically lower rates than other races while American Indian/Alaskan Natives saw statistically higher suicide rates. This seems to suggest that perhaps aspects of Asian/Pacific Islander culture serve as a protective factor while aspects of American Indian/Alaskan Native culture are risk factors. Lastly, Whites started committing suicide at the youngest age (7-8 years) while Black and American Indian/Alaskan Natives started committing suicide at later ages (13-14 years). Additionally, non-Hispanics saw earlier ages of suicide than Hispanics. This is an important implication for when suicide prevention strategies should target specific races/ethnicities.

WISQARS Leading Causes of Death (2017) also provided important results concerning age. The report showed that no youth aged 0-7 committed suicide in 2018. For races with

younger suicide victims (Whites), this age range might be a good time to start implementing suicide awareness, education, and prevention strategies. Ages 17-18 had the highest suicide rate. The age range when suicide is first committed (7-8 years) and the age range when suicide rates are the highest (17-18 years) seem to be crucial points to implement prevention strategies. The gap between these ranges suggests the importance of continued education and prevention across the adolescent life span, with intensive interventions to target youth before their age falls into either of these ranges. Targeting an intervention based on age might be more effective by also taking race/ethnicity into consideration, as age seems to differ in relationship with race/ethnicity.

Lastly, WISQARS Leading Causes of Death (2017) important data on the possible relationship between sex and suicide. Overall, females had statistically lower rates (2.09) than males (3.54). However, these were different from the results by Ivey-Stephenson et.al., (2020). They found that females considered attempting suicide, planned to attempt suicide, attempted suicide at least once, and had a suicide attempt that required medical attention more often than males. These drastically different findings suggest that future research should explore the relationship between sex and suicide.

The results by Ivey-Stephenson, et.al.,(2020) regarding the relationship between sexual identity and sexual contact also had important implications for suicide prevention interventions. Lesbian, gay, and bisexual students and students with unknown sexual identities suffered more from suicidal ideation and behavior than heterosexual students. Additionally, Ivey-Stephenson, et.al.,(2020) found that students who only had sexual contact with the same sex or with both sexes suffered more from suicidal ideation and behavior

than students who only had sexual contact with the opposite sex, however, students who had no sexual contact had the lowest prevalence of suicidal ideation and behavior. The relationship between sexual orientation and suicide is well-studied, and most experts agree that sexual minorities are more at risk to commit suicide or suffer from suicidal ideation, according to Ivey-Stephenson, et.al.,(2020). However, it is interesting that these results suggest that avoiding sexual contact seems to be a protective factor against suicidal ideation and behavior.

The relationship between socioeconomic status in American youth was under-researched and presents another interesting area for future research. However, Fang's (2018) findings about the relationship between attending low-income school and suicide in male students suggests that attending a low-income school is a risk factor and attending a middle- and high-income school is protective. I find this correlation very interesting, but again, this was one of the only articles in this subject area that I was able to find, so I would love to see someone publish more literature on this.

Lastly, firearm safety proves to be important in protecting youth from suicide. The findings by Schnitzer et.al., (2019) suggest that owning a gun is a risk factor and not owning one is a protective factor. Further, storing a firearm in the home is a risk factor. Storing a firearm in a location other than the child's residence seemed to be protective. Lastly, storing a firearm in a locked safe with protective features seems to be protective while not doing so poses a risk.

There were several limitations to this paper. I gathered secondary information, so my summary is only as reliable as the methods used in these studies. Additionally, this paper is limited to my interpretation of the results.

Outside of the technical results of this paper, I learned so much from this project. As a future graduate student and occupational therapist, I set several personal objectives for my research. It is likely that during my time as a pediatric clinician, I will cross paths with a young person contemplating suicide. I take my responsibility to provide the best care very seriously, and since suicide prevention is not a standard in occupational therapy education, I wanted to take the time to thoroughly research and educate myself on this topic. As a future graduate student, I wanted to gain more experience in research and technical writing to better prepare me for research endeavors at the graduate level. As a future graduate student, another objective I had was wanting to gain some research and technical writing experience.

Having never written a research paper before, this paper helped me learn a lot about this process. The biggest challenge for me was mapping out what I wanted my research to look like and getting started. I really wanted to deliver the expectations set for my paper, and the nervousness of not writing a perfect paper kept me from starting. However, as I started the process, I quickly realized that research presents many unexpected challenges, and the comparison of a final paper to the initial idea does not implicate the worth of the paper or its findings. I also reminded myself that this was my first research project, and perfect or not, it was the perfect opportunity to practice important skills to better prepare me for graduate school.

While I certainly have a lot of research skills to improve upon, this paper is an excellent benchmark from which to evaluate my progress. This is my very first research paper, so I learned a lot about gathering and evaluating quality sources and technical writing. I am really looking forward to the editing process with my sponsor, readers, and advisor. Personal

development is very important to me, and I know that I have a lot of room to grow as a researcher and I am excited to take action to make myself better. As a future occupational therapist, I feel that I learned a lot about what to look for and who to look at in terms of suicide prevention. I am very thankful for the opportunity to learn and grow from this project.

References

American Foundation for Suicide Prevention (2020). *Home*. American Foundation for Suicide Prevention. https://afsp.org/

Centers for Disease Control and Prevention (2020). *Youth risk behavior surveillance system.* Adolescent and School Health. https://www.cdc.gov/healthyyouth/data/yrbs/index.htm

Chu, J., Robinett, E. N., Ma, J. K. L., Shadish, K. Y., Goldblum, P., & Bongar, B. (2019). Cultural versus classic risk and protective factors for suicide. *Death Studies*, 43(1), 56–61. https://doi-org.ezproxy.uakron.edu:2443/10.1080/07481187.2018.1430085

Fang, M. (2018). School poverty and the risk of attempted suicide among adolescents. *School Psychiatry and Psychiatric Epidemiology* 53, 955-967. https://doi.org/10.1007/s00127-018-1544-8

Graves, J. M., Mackelprang, J. L., Van Natta, S. E., & Holliday, C. (2018). Suicide prevention training: Policies for health care professionals across the United States as of October 2017. *American Journal of Public Health*, *108*(6), 760–768. https://doi-org.ezproxy.uakron.edu:2443/10.2105/AJPH.2018.304373

Hochhauser, S., Rao, S., England-Kennedy, E., & Roy, S. (2020). Why social justice matters: a context for suicide prevention efforts. *International Journal for Equity in Health*, *19*(1), 1–8. https://doi-org.ezproxy.uakron.edu:2443/10.1186/s12939-020-01173-9

İlgün, G., Yetim, B., Demirci, Ş., & Konca, M. (2020). Individual and socio-demographic determinants of suicide: An examination on WHO countries. *International Journal of Social Psychiatry*, 66(2), 124–128. https://doi-org.ezproxy.uakron.edu:2443/10.1177/0020764019888951

Ivey-Stephenson, A.Z., Demisse, Z., Crosby, A.E., Stone, D.M., Gaylor, E., Wilkins, N., Lowry, R., Brown, M. Suicidal ideation and behaviors among high school students – youth risk behavior survey, United States, 2019. *MMWR* 61(1), 47-55. https://www.cdc.gov/mmwr/volumes/69/su/pdfs/su6901a6-H.pdf

Kim, Y., Moon, S., & Kim, M. (2011). Physical and psycho-social predictors of adolescents' suicide behaviors. *Child & Adolescent Social Work Journal*, 28(6), 421–438. https://doi-org.ezproxy.uakron.edu:2443/10.1007/s10560-011-0241-1

McCann, S. H. (2010). Suicide, big five personality factors, and depression at the American state level. *Archives of Suicide Research*, 14(4), 368–374. https://doi-org.ezproxy.uakron.edu:2443/10.1080/13811118.2010.524070

Pena, J., Matthieu, M., Zayas, L., Masyn, K., & Caine, E. (2012). Co-occurring risk behaviors among White, Black, and Hispanic US high school adolescents with suicide attempts requiring medical attention, 1999-2007: Implications for future prevention initiatives. *Social Psychiatry & Psychiatric Epidemiology*, 47(1), 29–42. https://doi-org.ezproxy.uakron.edu:2443/10.1007/s00127-010-0322-z

Reidenberg, D., & Berman, A. L. (2017). Changing the direction of suicide prevention in the United States. *Suicide & Life-Threatening Behavior*, 47(4), 509–517. https://doi-org.ezproxy.uakron.edu:2443/10.1111/sltb.12310

Sheftall, A. H., Asti, L., Horowitz, L. M., Felts, A., Fontanella, C. A., Campo, J. V., & Bridge, J. A. (2016). Suicide in elementary school-aged children and early adolescents. *Pediatrics*, 138(4), 1–10. https://doi-org.ezproxy.uakron.edu:2443/10.1542/peds.2016-0436

Smith, E. M. (2018). Suicide risk assessment and prevention. *Nursing Management (Springhouse), 49*(11), 22–30. doi: 10.1097/01.NUMA.0000547255.69344.cd.

Stone, D. M., Simon, T. R., Fowler, K. A., Kegler, S. R., Yuan, K., Holland, K. M., Ivey-Stephenson, A. Z., & Crosby, A. E. (2018). Vital signs: Trends in state suicide rates - United States, 1999-2016 and circumstances contributing to suicide - 27 States, 2015. *MMWR: Morbidity & Mortality Weekly Report*, 67(22), 617–624. https://doi-org.ezproxy.uakron.edu:2443/10.15585/mmwr.mm6722a1

Schnitzer, P.G., Dykstra, H.K., Triglyidas, T.E., & Lichenstein, R. (2019). Firearm suicide among youth in the United States, 2004-2005. *J Behav Med* 42, 584-590. https://doi.org/10.1007/s10865-019-00037-0

U.S. Department of Health and Human Services (2020). *Reduce the suicide rate - MHMD-01*. Healthy People 2020. https://health.gov/healthypeople/objectives-and-data/browse-objectives/mental-health-and-mental-disorders/reduce-suicide-rate-mhmd-01

WISQARS leading causes of death, CDC, 2019, webappa.cdc.gov/sasweb/ncipc/leadcause.html.